ABSTRACT

A color image capturing device using a mosaic color filter,
which can enhance sensitivity of a brightness signal while
suppressing cost increase. Line transfer from the accumulation
section 11v is conducted twice successively so that a combined line
which is combination of two lines is created in the horizontal
transfer section 11h. In a combined line, addition <R+G> of R
component and G component and addition <G+B> of G component and
B component are alternately arranged. A divided reset clock ϕ
r' for the output section 11d is set to have a cycle twice as long
as the cycle of a horizontal transfer clock ϕh, and the phase of
ϕr' is set being displaced by an amount corresponding to one cycle
of ϕh between an odd-numbered combined line and an even-numbered
combined line. Consequently, data D (R+G) corresponding to <R+G>
and data D (R+2G+B) corresponding to addition <R+G> and <G+B> are
alternately obtained relative to an odd-numbered line, while data
D (G+B) corresponding to <G+B> and data D (R+2G+B) corresponding
to addition <R+G> and <G+B> are alternately obtained relative to
an even-numbered line. Using data D(R+2G+B), which is data
obtained by combining four pixels, as a brightness signal,
sensitivity of the image capturing device can be enhanced. Color
signals are obtained from data D(R+G) and D(G+B).

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